

REMARKS

Applicants appreciate the Examiner's careful review of the present application, and respectfully request reconsideration in light of the preceding amendments and the following remarks.

Interview Summary

Applicant thanks the Examiner for the courtesies extended during the personal interview conducted on June 14, 2010. The cited reference (U.S. Patent No. 6,249,740) and the claims in view of the cited reference were discussed. Applicant has reviewed the Interview Summary of the interview of June 14, 2010, submitted by the Examiner and believes that it is complete and accurately represents the substance of the interview. Further, Applicant believes no additional written statement pursuant to MPEP §713.04 is necessary. If this belief is incorrect, the Examiner is requested to call the undersigned or his associates at the telephone number listed below.

Claim Amendments/Status

By way of this reply, independent claims 1 and 7 have been amended to clarify that one or more deviation-expected paths are stored in a memory of the navigation system installed in the mobile object before the mobile object deviates from the navigation path. This claim amendment finds solid support in page 5, line 16 to page 10, line 12 of the original specification. No new matter has been introduced through these amendments.

Rejection under 35 U.S.C. §112

Claims 1-5 and 7-11 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. By this reply, Applicant amends claims 1 and 7 to address the concerns raised by the Examiner. Accordingly, withdrawal of this rejection is respectfully requested.

Rejection under 35 U.S.C. §103

Claims 1-5 and 7-11 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,249,740 (“Ito”). Applicant respectfully traverses this rejection for the following reasons.

Amended independent claims 1 and 7 recite, *inter alia*, “storing the one or more deviation-expected paths in a memory of the navigation system installed in the mobile object before the mobile object deviates from the navigation path” (emphasis added). Advantageously, according to the claimed invention, one or more deviation-expected paths are precalculated and *stored in the memory of the navigation system installed in the mobile object* before the driver deviates from the original navigation path, and therefore the driver can be informed of a revised navigation path as promptly as possible, based on the deviation-expected paths *stored in the navigation system in the mobile object*. In other words, the driver needs not wait until the remote navigation server transmits re-calculated return routes to the mobile object, and can thus cope with the deviation more promptly than in conventional art.

Ito relates to a communication navigation system where data is transmitted and received between a navigation base and a vehicle navigation apparatus. Ito, however, merely shows that return route data is *transmitted* from a remote server (i.e., the data base 153) to the vehicle navigation apparatus 100 to enable the driver of the vehicle to return to the searched route when the vehicle *has departed* from the searched route (see col. 21, lines 55-61). This is also confirmed by the Examiner’s comment in paragraph 6 on page 7 of the instant Office Action. Due to this difference from the claimed invention, the navigation system of Ito cannot avoid the disadvantage that the driver must wait for a relatively long time until receiving the return route data, and thus will have more difficulty returning to the original route. Therefore, Ito fails to show or teach at least “storing the one or more deviation-expected paths *in a memory of the navigation system installed in the mobile object* before the mobile object deviates from the navigation path,” as required by independent claims 1 and 7.

Furthermore, Applicant respectfully notes that not only does Ito not show the

forementioned features of claims 1 and 7, but also effectively teaches away from them. In fact, the main objective presented in Ito is to reduce the amount of data transmitted from the remote server to the navigation system on board, and thus emphasizes in a number of instances transmitting only the information on the approved route and the surrounding areas of the departure point, course-change points of intersections, and destination.

The present invention has been made in view of the problems described above. Accordingly, an object of the present invention is to provide a communications navigation system which can *reduce an amount of data to be transmitted* from a navigation base to a moving body such as a vehicle.

Another object of the present invention is to provide a communications navigation system which is able to carry out a satisfactory route guidance even if *the amount of data to be transmitted to the moving body is reduced*.

Other object of the present invention is to provide a communications navigation system which can simplify the structure of a vehicle navigation apparatus [by reducing the amount of data to be transmitted to and stored in the vehicle].

The other object of the present invention is to provide a communications navigation system which can *reduce an amount of data to be transmitted from the navigation base to the moving body by transmitting only navigation data requested from the movable body*. See col. 2, line 59 – col. 3, line 8. Emphasis added.

According to the communications navigation system of the present invention as described above, *the amount of data to be transmitted* from the navigation base apparatus to the navigation apparatus *is reduced*. Further, because this makes it possible to reduce the memory capacity of the navigation apparatus, it becomes possible to simplify the navigation apparatus. Furthermore, even with *such a reduced amount of data*, the navigation system described above makes it possible to carry out a precise route guidance. See col. 3, ll. 38-45. Emphasis added.

Further, because the navigation base apparatus 150 transmits *only essential data necessary for route guidance*, it becomes possible to *reduce the amount of data to be transmitted* from the navigation base apparatus 150 to the vehicle navigation apparatus 100. However, because detailed guidance data about a course-change point and a surrounding area thereof is transmitted from the navigation base apparatus 150 to the vehicle navigation apparatus 100, it is possible to carry out necessary route guidance. See col. 8, ll. 41-50. Emphasis added.

(2-5) Transmitting Outline Map of Searched Route and Route/Guidance Data

Next, the route/guidance data (included in navigation data) which includes *the data of the outline map of the searched route, the road data, the*

intersection data and the area guidance data obtained as described above is transmitted to the vehicle navigation apparatus 100 through the communications control section 151 (Step S9). At this time, according to the vehicle ID that is received from the vehicle together with the route search request in Step S1, the route/guidance data is transmitted to the vehicle navigation apparatus 100 of the corresponding vehicle. In this transmission of data, the data of the outline map of the route is transmitted first.

FIG. 7 shows the main contents of the route/guidance data to be transmitted to the vehicle navigation apparatus 100. In this figure, FIG. 7(A) shows the position data of the departure point and destination represented by geographic coordinates defined by Longitude and Latitude. FIG. 7(B) shows the road data concerning *the searched route*, which includes data of the road numbers and various data corresponding to each road number (see FIG. 2(A)). FIG. 7(C) shows the intersection data concerning the intersections on the searched route, which includes data of the intersection numbers, various data corresponding to each intersection (see FIG. 2(B)) and the entrance road and exit road data of the respective intersections as shown in FIG. 5(C). See col. 14, line 46 – col. 15, line 6. Emphasis added.

The operations described above for the first embodiment of the navigation system can be summarized as follows:

(i) The navigation base apparatus carries out a route search, and extracts data concerning the course-change points and surrounding areas thereof. Further, *only for the surrounding areas of the departure point, course-change points and destination, detailed route/guidance data including map data and voice data is transmitted to the vehicle navigation apparatus.*

(ii) At the vehicle, the vehicle navigation apparatus uses the route/guidance data transmitted from the navigation base apparatus to carry out detailed guidance by displaying detailed maps of the departure point, course-change points and destination and by outputting corresponding voice guidance.

According to the navigation system of the first embodiment described above, *the amount of data to be transmitted from the navigation base apparatus to the vehicle navigation apparatus is reduced.* Further, because this makes it possible to reduce the memory capacity of the vehicle navigation apparatus, it becomes possible to simplify the vehicle navigation apparatus. Furthermore, even with such a reduced amount of data, the navigation system described above makes it possible to carry out a precise route guidance. See col. 18, line 53 – col. 19, line 9. Emphasis added.

As presented above, in order to reduce the amount of data to be transmitted between the navigation base and the vehicle navigation apparatus, Ito emphasizes transmitting only the data on the approved route and on the surrounding areas of the departure point, course-change points, and destination of the approved route. By doing so, Ito effectively teaches away from “storing the one or more deviation-expected paths in a memory of the navigation system installed in the mobile object before the mobile object deviates from the navigation path,” as required by

independent claims 1 and 7. Therefore, Applicant respectfully submits that Ito cannot be relied upon in a 103 rejection of the claimed invention. See *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983). See also MPEP 2145.

Accordingly, independent claims 1 and 7 are patentable over Ito. Claims 2-5 and 8-11, depending from claim 1 or 7, are patentable over Ito for at least the reasons advanced above with respect to claim 1 or 7. Accordingly, withdrawal of this rejection is respectfully requested.

Conclusion

All objections and rejections having been addressed, it is respectfully submitted that the present application should be in condition for allowance and a Notice to that effect is earnestly solicited. Early issuance of a Notice of Allowance is courteously solicited.

The Examiner is invited to telephone the undersigned, Applicant's attorney of record, to facilitate advancement of the present application. To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,
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